

Title (en)

PROCESS AND COMPOSITION FOR FORMATION OF HYBRID ALUMINUM COMPOSITE COATING

Title (de)

VERFAHREN UND ZUSAMMENSETZUNG ZUR HERSTELLUNG EINER HYBRIDEN ALUMINIUMVERBUNDBESCHICHTUNG

Title (fr)

PROCÉDÉ ET COMPOSITION POUR LA FORMATION D'UN REVÊTEMENT COMPOSITE D'ALUMINIUM HYBRIDE

Publication

**EP 3852959 A1 20210728 (EN)**

Application

**EP 19861505 A 20190918**

Priority

- US 201862734242 P 20180920
- CA 2019051321 W 20190918

Abstract (en)

[origin: WO2020056505A1] Process for formation of composite coatings and composite coatings formed thereby. A process for formation of a metal-matrix composite coating on a surface of a substrate is provided. The substrate is an aluminum alloy. The metal-matrix composite coating is formed on the substrate through laser deposition using filler materials comprising aluminum, silicon and graphite. The particles forming the metal-matrix composite coating are formed in-situ from the filler materials. A metal-matrix composite coating obtained by the laser deposition process with in-situ formation of particles is also provided.

IPC 8 full level

**B22F 7/04** (2006.01); **B22F 3/105** (2006.01); **C23C 24/10** (2006.01)

CPC (source: EP KR US)

**B22F 3/105** (2013.01 - KR); **B22F 7/008** (2013.01 - EP); **B22F 7/04** (2013.01 - KR US); **B22F 7/08** (2013.01 - EP); **B22F 10/25** (2021.01 - EP); **B23K 26/342** (2015.10 - US); **B33Y 10/00** (2014.12 - EP); **B33Y 70/10** (2020.01 - EP); **C22C 1/055** (2013.01 - EP); **C22C 32/0052** (2013.01 - EP); **C23C 24/10** (2013.01 - EP KR); **C23C 24/103** (2013.01 - US); **C23C 30/00** (2013.01 - EP); **B22F 2003/1051** (2013.01 - KR); **B22F 2007/042** (2013.01 - KR); **C22C 32/0063** (2013.01 - EP); **Y02P 10/25** (2015.11 - EP)

Cited by

CN113878120A; CN113878119A

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

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**WO 2020056505 A1 20200326**; CA 3108090 A1 20200326; CA 3108090 C 20230704; CN 112739480 A 20210430; CN 112739480 B 20230502; EP 3852959 A1 20210728; EP 3852959 A4 20220209; JP 2022500551 A 20220104; JP 7394113 B2 20231207; KR 20210060437 A 20210526; US 11453088 B2 20220927; US 2021316398 A1 20211014

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